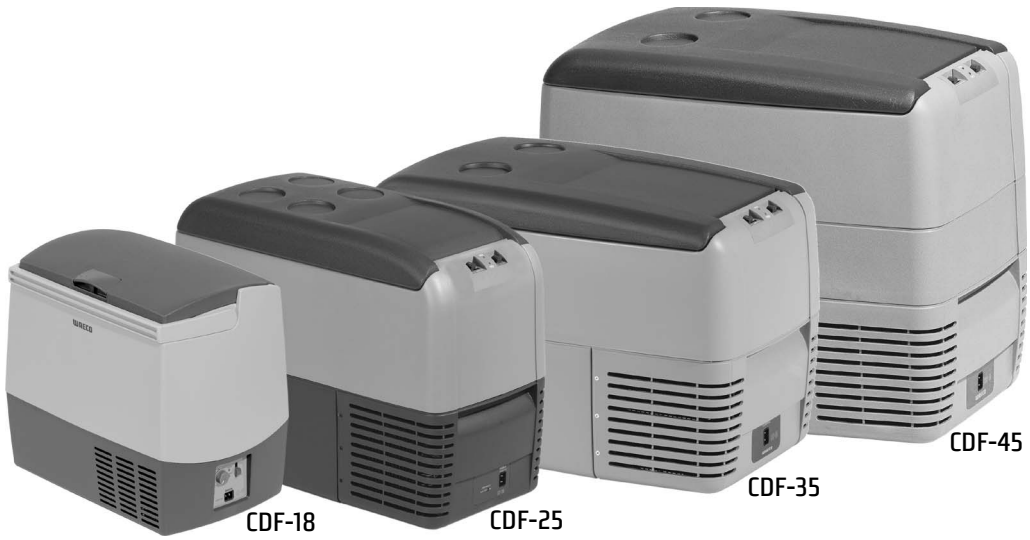
WAECO
by Dometic GROUP



WAECO CoolFreeze CDF-18, CDF-25, CDF-35, CDF-45

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(D)

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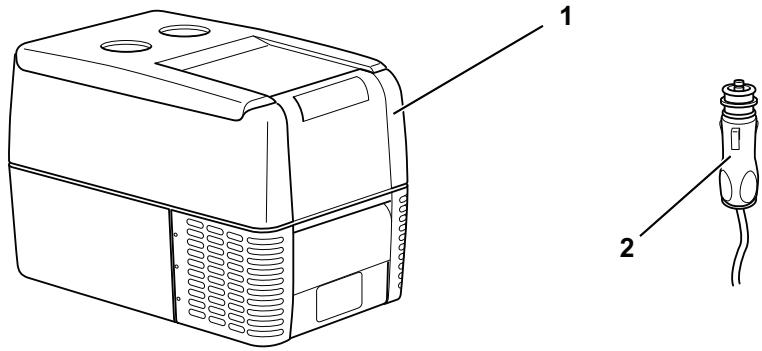

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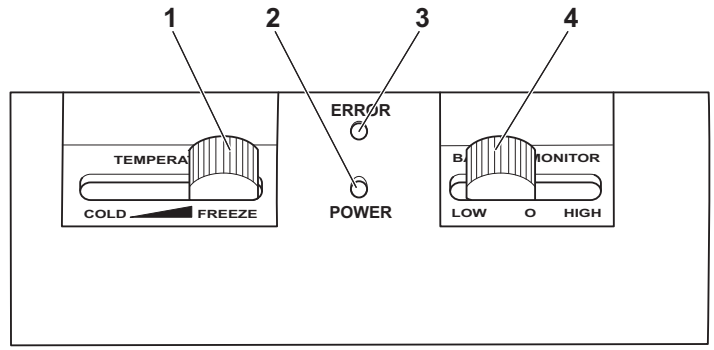

CDF-25, CDF-35, CDF-45

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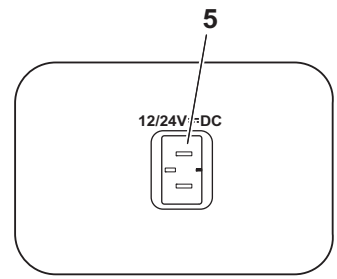

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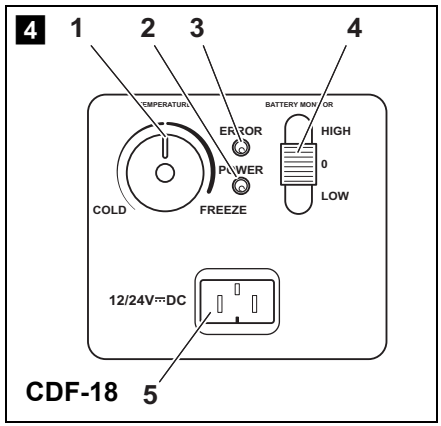
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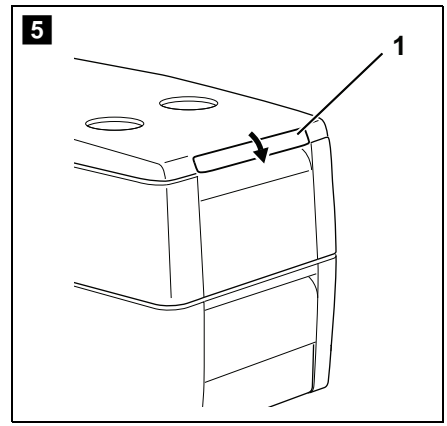
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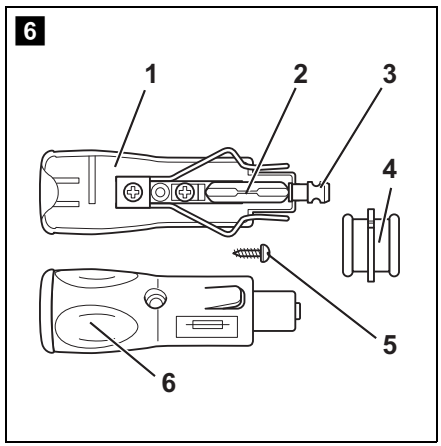
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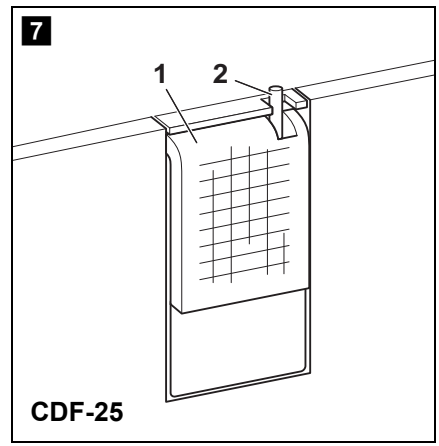
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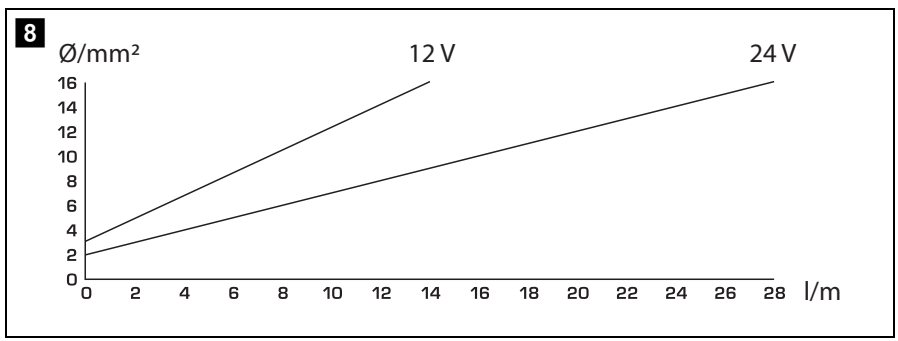
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l/m

Please read this operating manual carefully before starting the device. Keep it in a safe place for future reference. If the device is handed over to another person, this operating manual must be handed over along with the device.

Contents

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1 Notes on using the manual

The following symbols are used in this operating manual:

Caution!
Safety instruction: Failure to observe this instruction can cause personal injury or damage the device.

Caution!
Safety instruction relating to a danger from an electrical current or voltage. Failure to observe this instruction can cause injury or damage the device and impair its function.

Note
Supplementary information for operating the device.

➤ **Action:** This symbol indicates that action is required on your part. The required action is described step-by-step.

✓ This symbol indicates the result of an action.

Fig. 2 1, page 3: This refers to an element in an illustration. In this case, item 1 in figure 2 on page 3.

Please observe the following safety instructions.

2 Safety instructions

The manufacturer will not be held liable for claims for damage resulting from the following:

- Faulty assembly or connection
- Damage to the appliance resulting from mechanical influences and excess voltage
- Alterations to the device without express permission from the manufacturer
- Use for purposes other than those described in the operating manual

2.1 General safety

- **Caution – Danger of electrocution!**
  When using the device on boats: If the device is powered by the mains, ensure that the power supply is protected with a ground fault interrupter circuit.
- Check that the voltage specification on the type plate corresponds to that of the energy supply.
- Only connect the device with the cable supplied (fig. 1 2, page 3) to the cigarette lighter in the vehicle or to a 12/24 V plug socket in the vehicle.
- If the connection cable is damaged, it must be replaced to prevent possible electrical hazards.
- Do not pull the plug out of the cigarette lighter or the socket by the cable.
- Disconnect the device from the mains:
  – Before cleaning and maintenance
  – After use

- Disconnect the cooling device and other power consuming devices from the battery before you connect the battery to a quick charging device. Overvoltage can damage the electronics of the device.

- **Persons (including children) whose physical, sensory or mental capabilities or lack of experience and knowledge prevents them from using the appliance safely should not use this appliance without initial supervision or instruction by a responsible person**
- **Electronic devices are not toys**!
  Always keep and use the device out of the reach of children.
- Children must be supervised to ensure that they do not play with the device.
- Do not operate the device if it is visibly damaged.
- This device may only be repaired by qualified personnel. Inadequate repairs can lead to considerable hazards.
- Do not open the refrigerant circuit under any circumstances!
- The cooler is not suitable for transporting caustic materials or materials containing solvents.
- Food may only be stored in its original packaging or in suitable containers.

2.2 Operating the device safely

- **Caution – Danger of electrocution!**
  Do not touch exposed cables with your bare hands. This especially applies when operating the device from an AC mains.
- Before starting the device, ensure that the power supply line and the plug are dry.

- Do not place any electrical devices inside the cooler.
- Set up the device in a dry location where it is protected against splashing water.
- Protect the device and the cable against rain and moisture.
- Do not place the device near naked flames or other heat sources (heaters, direct sunlight, gas ovens etc.)

- **Caution! Danger of overheating!**
  Ensure at all times that there is sufficient ventilation so that the heat generated during normal operation is able to dissipate. Ensure that the ventilation slots are not covered. Make sure that the device is sufficiently far away from walls and other objects so that the air can circulate.
- Never immerse the device in water.
- Do not fill the inner container with ice or fluid.

3 Scope of delivery

fig. **1**, page 3, shows the scope of delivery.

Item	Quantity	Description
1	1	Cooler
2	1	Connection cable for 12/24 V_{DC} connection
–	1	Operating manual

4 Intended use

The cooler is suitable for cooling and freezing foods. The device is also suitable for use on boats.

The device is designed to be operated from a 12 V_{DC} or 24 V_{DC} on-board supply socket of a vehicle (e. g. cigarette lighter), boat or caravan.

Note
To operate the device at the AC mains supply, we recommend using one of the following WAECO rectifiers:
– 220–240 V: CoolPower EPS100
– 110–240 V: CoolPower MPS35

Caution – When cooling perishable medicines!
If you wish to cool medicines, please check if the cooling capacity of the device is adequate for this purpose.

5 Function description

The cooler can chill products, keep them cool as well as freeze them. A maintenance-free refrigerant circuit with compressor provides the cooling. The extra strong insulation and powerful compressor ensure especially fast cooling.

The cooler is designed for mobile use.

When used on boats, the cooler can be withstand a constant heel (inclination) of 30°.

An integrated dual-level battery monitor prevents your vehicle battery from being discharging too low.

5.1 Operating and display elements

Operating panel and connection socket
(fig. **2**, page 3, fig. **3**, page 3, fig. **4**, page 4):

Item	Description	Explanation	
1	TEMPERATURE	Temperature controller, cooling temperature at the end positions:	
		COLD:	+10 °C
		FREEZE:	**CDF-18**, **CDF-25**: –18 °C
			CDF-35, **CDF-45**: –15 °C
2	POWER	Operating display	
		LED is lit green:	Device is switched on and ready for operation
		CDF-18 only: LED is lit yellow:	Set temperature has been reached
3	ERROR	LED flashes red:	Switched on device is not ready for operation
4	BATTERY MONITOR	Switch-on device/battery monitor:	
		0:	Device is switched off
		HIGH:	Device is switched on, battery monitor is in HIGH mode
		LOW:	Device is switched on, battery monitor is in LOW mode
5	12/24V DC	Connection socket DC voltage supply	

Lock for lid: fig. **5**, page 4

5.2 Accessories

To operate the device at the AC mains supply, we recommend using one of the following WAECO rectifiers:
– 220–240 V: CoolPower EPS100
– 110–240 V: CoolPower MPS35

6 Operation

6.1 Before initial use

Note
Before starting your new cooler for the first time, you should clean it inside and outside with a damp cloth for hygienic reasons (please also refer to the chapter “Cleaning and maintenance” on page 30).

6.2 Energy saving tips

- Choose a well ventilated installation location which is protected from direct sunlight.
- Allow hot food to cool down first before you place it into the device.
- Do not open the cooler more often than necessary.
- Do not leave the lid open for longer than necessary.
- Defrost the cooler once a layer of ice forms.
- Avoid unnecessary low temperatures.

6.3 Connecting the cooler

Note
The design of the 12/24 V socket on your vehicle may not be suitable for connecting the compressor cooler. Only an authorised specialist may fit an electrical lead/socket designed for the cooler.
Please observe the following instructions:

- Connect your cooling device as directly as possible to the battery terminal or to an outlet with a fuse of at least 15 A (12 V) or 7.5 A (24 V).
- Ensure that the positive cable is connected to the positive terminal and the negative cable to the negative terminal.
- To avoid voltage loss and therefore a drop in performance or complete failure, the cable route should be kept as short as possible and should not be interrupted if this is possible.
- Avoid additional switches, plugs or power strips.
- If the connection cable is too short or one is not delivered with your model, you should obtain a suitable cable from a specialist dealer. Determine the required cross section of the cable using the diagram (fig. **8**, page 4).

The cooler can be operated with 12 V or 24 V DC.

Caution – Danger of damaging the device!
Disconnect the cooler and other consumer units from the battery before you connect the battery to a quick charging device. Overvoltage can damage the electronics of the device.

For safety reasons the cooler is equipped with an electronic system to prevent the polarity reversal. This protects the cooler against short-circuiting when connecting to a battery.

➤ Plug the 12/24-V connection cable (fig. **1** 2, page 3) into the DC voltage socket and also into the cigarette lighter or a 12 V or 24 V socket.

6.4 Using the battery monitor

If the cooler is operated when the vehicle ignition is switched off, the cooler switches off automatically as soon as the supply voltage falls below a set level. The cooler will switch back on once the battery has been recharged to the restart voltage level.

Caution – Danger of damage!
When switched off by the battery monitor, the battery will no longer be fully charged. Avoid starting repeatedly or operating current consumers without longer charging phases. Ensure that the battery is recharged.

In “HIGH” mode, the battery monitor responds faster than at the levels “LOW” and “MED” (see the following table).

Battery monitor mode	LOW	HIGH
Switch-off voltage at 12 V	10.2 V ± 0.3 V	11.2 V ± 0.3 V
Restart voltage at 12 V	11.2 V ± 0.3 V	12.2 V ± 0.3 V
Switch-off voltage at 24 V	22.0 V ± 0.3 V	23.9 V ± 0.3 V
Restart voltage at 24 V	23.3 V ± 0.3 V	25.1 V ± 0.3 V

Note
When the cooler is supplied by the starter battery, select the battery monitor mode “HIGH”. If the cooler is connected to a supply battery, the battery monitor mode “LOW” will suffice.
If you wish to operate the cooler from the AC mains, set the battery monitor to the “LOW” position.

6.5 Using the cooler

Caution – Danger of overheating!
Ensure at all times that there is sufficient ventilation so that the heat that generated during operation can dissipate. Ensure that the ventilation slots are not covered. Make sure that the device is sufficiently far away from walls and other objects so that the air can circulate.

➤ Place the cooler on a firm foundation.
Make sure that the ventilation slots are not covered and that the heated air can dissipate.

➤ Close the cooler, see “Connecting the cooler” on page 26.

Caution – Danger from excessively low temperature!
Ensure that the only those objects are placed in the cooler that are intended to be cooled at the selected temperature.

Locking the cooler

➤ Close the lid.

➤ Press the lock (fig. **5** 1, page 4) down, until it latches in place audibly.

Switching on the cooler

➤ Slide the sliding switch “BATTERY MONITOR” to HIGH if you wish to operate from a starter battery or to “LOW” if you want to operate from a supply battery.

Note
If you wish to operate the cooler from the AC mains, set the battery monitor to the “LOW” position.

✓ The “POWER” LED is lit green.

✓ The cooler starts cooling the interior.

➤ Set the cooling temperature with the temperature controller “TEMPERATURE”.

✓ **CDF-18 only**: When the cooling temperature has been reached, the “POWER” LED is lit yellow.

Switching off the cooler

- ➤ Empty the cooler.
- ➤ To Switch the cooler off: Slide the sliding switch “BATTERY MONITOR” to “0”:
- ➤ Pull out the connection cable.

If you do not want to use the cooler for a longer period of time:

- ➤ Leave the cover slightly open. This prevents odour build-up.

6.6 Defrosting the cooler

Humidity can form frost in the interior of the cooling device or on the vaporiser. This reduces the cooling capacity. Defrost the device in good time to avoid this.

Caution – Danger of damaging the device!
Never use hard or pointed tools to remove ice or to loosen objects which have frozen in place.

To defrost the cooler, proceed as follows:

- ➤ Take out the contents of the cooling device.
- ➤ If necessary, place them in another cooling device to keep them cool.
- ➤ Switch off the device.
- ➤ Leave the cover open.
- ➤ Wipe off the defrosted water.

6.7 Replacing the plug fuse (12/24 V)

- ➤ Pull the adapter sleeve (fig. **6** 4, page 4) off of the plug.
- ➤ Unscrew the screw (fig. **6** 5, page 4) out of the upper half of the housing (fig. **6** 1, page 4).
- ➤ Carefully raise the upper half of the housing from the lower (fig. **6** 6, page 4) half.
- ➤ Take out the contact pin (fig. **6** 3, page 4).
- ➤ Replace the defective fuse (fig. **6** 2, page 4) with a new one that has the same rating (8A 32V).
- ➤ Re-assemble the plug in the reverse order.

6.8 Replacing the light bulb (CDF-25 only)

➤ Press the switch pin (fig. 7 2, page 4) downwards so that the transparent part (fig. 7 1, page 4) of the lamp can be removed at the front.

➤ Replace the light bulb.

➤ Press the lamp back into the housing.

7 Cleaning and maintenance

Caution – Danger of electrocution!
Always pull out the mains plug before you clean and service the device.

Caution – Danger of damaging the device!
Never clean the device under running water or in dish water.
Do not use abrasive cleaning agents or hard objects during cleaning as these can damage the device.
Never use brushes, scouring pads or hard or pointed tools to remove ice or to loosen objects which have frozen in place.

➤ Occasionally clean the inside of the device with a damp cloth.

8 Guarantee

The statutory warranty period applies. If the product is defective, please contact the manufacturer's branch in your country (see the back of the instruction manual for the addresses) or your retailer.

For repair and guarantee processing, please include the following documents when you send in the device:

- A copy of the receipt with purchasing date
- A reason for the claim or description of the fault

9 Troubleshooting

Fault	Possible cause	Suggested remedy
Device does not function, LED does not glow.	There is no voltage present in the 12/24 V socket (cigarette lighter) in the vehicle.	The ignition must be switched on in most vehicles to supply current to the cigarette lighter.
	No voltage present in the AC voltage socket.	Try using another plug socket.
	The cooler has been connected with the wrong polarity.	Check how the cables are laid for the cooler.
The cooler does not cool properly when the vehicle engine is switched off.	The battery voltage is not sufficient for running the cooler when the vehicle engine is switched off.	Set the battery monitor to LOW. NOTE: This setting can result in the battery voltage becoming too low to start the vehicle if the cooler has been running off it for a long time.
The device does not cool (plug is inserted, “ERROR” LED flashes).	Battery voltage is too low.	Test the battery and charge it as needed.
When operating from the 12/24-V socket (cigarette lighter): The ignition is on and the device is not working and the LED is not lit. Pull the plug out of the socket and make the following checks.	The cigarette lighter socket is dirty. This results in a poor electrical contact.	If the plug of your cooler becomes very warm in the cigarette lighter socket, either the lighter socket must be cleaned or the plug has not been assembled correctly.
	The fuse of the 12/24 V plug has blown.	Replace the fuse (5 A) in the cigarette lighter plug, see “Replacing the plug fuse (12/24 V)” on page 29.
	The vehicle fuse has blown.	Replace the vehicle’s 12/24 V socket fuse (usually 15 A). Please refer to your vehicle’s operating manual.
"ERROR" LED flashes for longer than 2 minutes, as follows: 3 flashes, pause, 3 flashes, pause, ...	Device is defective.	This can only be repaired by an authorised customer services unit.

10 Disposal

➤ Place the packaging material in the appropriate recycling waste bins wherever possible.

If you wish to finally dispose of the device, ask your local recycling centre or specialist dealer for details about how to do this in accordance with the applicable disposal regulations.

11 Technical data

	WAECO CoolFreeze			
	CDF-18	CDF-25	CDF-35	CDF-45
Art.-Nr.:	9105100002	9105100003	CDF-035DC	CDF-045DC
Overall capacity:	18 litres	23 litres	31 litres	39 litres
Connection voltage:	12/24 V_{DC}			
Rated current:				
– 12 V_{DC}:	4.0 A ± 0.5	5.0 A ± 0.5	5.0 A ± 0.5	5.0 A ± 0.5
– 24 V_{DC}:	1.7 A ± 0.5	2.5 A ± 0.5	2.5 A ± 0.5	2.5 A ± 0.5
Cooling capacity:	+10 °C to –18 °C		+10 °C to –15 °C	
Dimensions (WxHxD) in mm:	456x414x300	550x425x260	560x380x340	560x475x340
Weight:	11.5 kg	12 kg	12.5 kg	13.5 kg
Test/certificates:				

Note
At ambient temperatures above 32 °C (90 °F) the minimum temperature cannot be achieved.

Versions, technical modifications and delivery options reserved.
The coolant circuit contains R134a.